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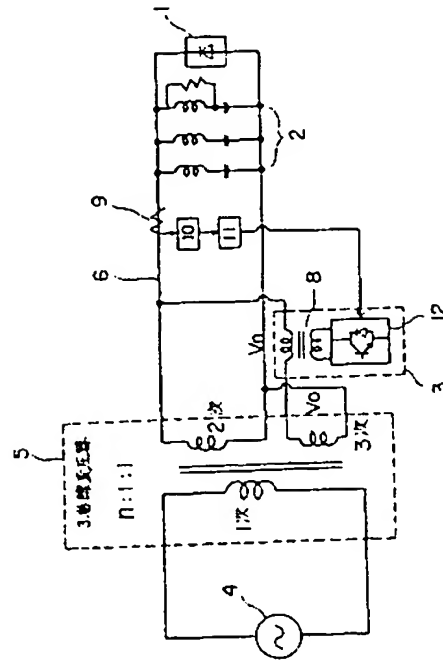
APPLICATION NUMBER : 01197438

APPLICANT : RAILWAY TECHNICAL RES INST;

INVENTOR : KAGA SHIGEO;

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TITLE : HIGHER HARMONIC FILTER FOR
POWER SYSTEM



ABSTRACT : PURPOSE: To reduce required capacity considerably and to reduce the cost by feeding fundamental wave voltage component through the tertiary side of a three winding transformer for load to an active filter and producing only a corrected fundamental wave voltage and a higher harmonic compensated voltage.

CONSTITUTION: A bus 6 is arranged through the secondary of a three winding transformer 5 connected with a power source 4 and an L-C filter group 2, tuned with 3rd and 5th higher harmonics, is connected with a higher harmonic generating load 1 connected with the bus 6. A voltage V_0 is fed from the power source 4 through the tertiary side of the transformer 5 to an inverter 12 where a required V_n is lapped over the voltage V_0 through a coupling transformer 8, thus carrying out coupling with a system bus 6. Second higher harmonic is taken out through a higher harmonic current detector 10, and a control circuit 11 performs power conduction control of the elements in the inverter 12 through a comparator thus producing a voltage for canceling the higher harmonic current. By such arrangement, abnormality such as lower harmonic counter resonance can be suppressed through an inexpensive arrangement.

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